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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,287	08/04/2006	Yoshiro Fujino	052363-0035	5414

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MCDERMOTT WILL & EMERY LLP  
600 13TH STREET, N.W.  
WASHINGTON, DC 20005-3096

EXAMINER
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YEE, DEBORAH

ART UNIT	PAPER NUMBER
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1793

MAIL DATE	DELIVERY MODE
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03/25/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/588,287	<b>Applicant(s)</b> FUJINO ET AL.
	<b>Examiner</b> Deborah Yee	<b>Art Unit</b> 1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 11-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/26/07</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 11 to 13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claims. Election was made **without** traverse in the reply filed on October 9, 2008.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1 to 10 and 14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 recites "40% or higher reduction of area" which does not clearly define the invention because reduction could occur during drawing rather than after quenching and tempering. It is recommended to use language such as ---40% or higher reduction of area after quenching and tempering---.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 to 10 and 14 are rejected under 35 U.S.C. 103 (a) as being unpatentable over R & D Kobe Steel Technical Report ("Publication 1") in view of Hiroshi Suzuki, ed., Plastic Processing ("Publication 2) and further in view Japanese patent 2003-213372 ("JP-372") or Applicant's admitted prior art in paragraph [0011] of instant specification. Note all references were cited by Applicant in IDS filed June 26, 2007.

8. Publication 1 discloses spring steel wire containing C: 0.59%, Si: 1.93%, Mn: 0.85%, Cr: 0.91%, N: 0.25% and V: 0.1%, and is processed by hot rolling, patenting, drawing oil-tempering and nitriding. In the Drawing (Figure7), the spring steel exhibits tensile strength (TS) of about 2000 MPa at 420°C.

9. Publication 2 teaches the conversion equation of the shear yield stress and TS on page 53. That is, the shear yield stress is defined on the basis of TS. When calculated with the TS of 2000 MPa disclosed by spring steel of publication 1, the shear yield stress is estimated to be 1000-1150 MPa. Since prior art steel can exhibit a shear yield stress that can be 1150 MPa at 420°C for 1.5 hours, then it would also obviously exhibit a shear stress at 1000 MPa after heat treatment for at least 2 hours at a temperature ranging from 420 to 480°C in absence of evidence to the contrary. This conclusion is further substantiated in view of Applicant's admission in paragraph [0011] of instant specification which states that present invention provides spring steel wire

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having a shear yield stress after subjected to heat treatment comparable to nitriding treatment following the quenching - tempering.

10. Even though spring steel of publication 1 is made by a slightly different process than present invention, such would not be a patentable distinction. Note that in a product-by-process claim, patentability is determined by the product per se and not its process of making. The burden falls to Applicant to show that any process steps associated with the claimed product result in a materially different product from those of the prior art, because there is nothing in the record before the Examiner to reasonably conclude that claimed product differs in kind from those obtained by the reference. See MPEP 706.03(e).

11. Spring steel of Publication 1 has a composition that meets claims 3, 6, and 7.

12. Spring steel of Publication 1 has a composition that meets claims 2, 4 and 5 except for 0.02 to 1.0% Co. Nevertheless, Co is a conventional additive for analogous springs to further enhance toughness as evident by JP-372 in paragraph [0023]; and therefore would be a matter well within the skill of the artisan to incorporate.

13. Spring steel of Publication 1 is subjected to hardening by heating, quenching and tempering; and therefore would be expected to have prior austenite grain size in the range of 3.0 to 7.0  $\mu\text{m}$ . Note that quenching and tempering reduces austenitic grain size as evident by paragraph [0012] in JP-372.

14. Spring steel of Publication 1 is used to manufacture spring and therefore meets claims 9 and 10.

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15. Spring steel of Publication 1 is made by patenting which comprises the steps of austenitizing at 950°C followed with isothermal transformation at 650°C for 70 seconds; and therefore meets newly submitted claim 14. Even though publication 1 does not disclose an austenization time of 60 to 180 seconds, such would not be a patentable distinction since time would be a matter well within the skill of the artisan to select in order to complete austenitization.

### ***Conclusion***

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/  
Primary Examiner, Art Unit 1793

/DY/